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Error-Prone Conditions Can Lead to Student Nurse-Related Medication Mistakes

Huntingdon Valley, Pa.—Student nurses are an important part of the patient care team and can enrich patients' experiences during hospitalization—however, some circumstances may increase the chance of their involvement in medication errors. The Institute for Safe Medication Practices (ISMP) has analyzed medication errors by student nurses, and discovered that a distinct set of error-prone conditions or medications can make mistakes involving students more likely. The Institute's findings are published in the October 18, 2007 issue of the *ISMP Medication Safety Alert!* newsletter.

Some student-related errors are similar in origin to those that involve seasoned licensed healthcare professionals, including misinterpreting abbreviations and misidentifying drugs due to look-alike packages or labels. But by examining data from the United States Pharmacopeia-ISMP Medication Error Reporting Program and the Pennsylvania Patient Safety Reporting Program, ISMP found that a significant number of other errors stem from more system-related problems, some of which are unique to environments where students and hospital staff are caring together for patients.

One major system problem is the **duality of patient assignments**; patients assigned to student nurses are also assigned to staff nurses. Although this policy is necessary, it makes communication breakdowns regarding who will administer which prescribed medications and when more likely. Communication between students, nursing instructors, and staff needs to be planned carefully to ensure that safety issues are taken into consideration.

Data also shows that **insulin** is among the most frequent drugs involved in student nurse-related errors, particularly with omitting doses, selecting the wrong type of insulin, administering the wrong sliding-scale coverage, and administering insulin to the wrong patient. Nursing instructors and students should treat insulin as a high-alert medication and observe all safeguards in place to prevent errors, including a double-check of all insulin doses by a staff nurse before administration.

An abbreviated list of other conditions that promote student nurse-related errors is provided below. A full chart that also gives examples of errors and ISMP recommendations for prevention was published in the October 18 issue of the *ISMP Medication Safety Alert!* To receive a copy, contact Renee Brehio at 704-831-8822 or rbrehio@ismp.org.

Conditions that Promote Student-Nurse Related Medication Errors

- **Nonstandard Times**. Medications scheduled for administration during nonstandard or less commonly used times, particularly early in the morning, are prone to student dose omissions.

- **Documentation Issues**. With both staff nurses and students administering medications to the same patients, dose omissions or extra doses have been administered because students or staff nurses have not properly documented or reviewed prior documentation of drug administration.

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- **MARs Unavailable or Not Referenced.** Students may not consistently use the patient's medication administration record (MAR) to guide the preparation of medications, and may not bring it consistently to the bedside for reference when administering medications.

- **Partial Drug Administration**. Students may not be administering all of the prescribed medications to assigned patients, particularly IV medications that they may not be permitted to administer. This can lead to missed doses due to confusion about who is responsible for administration of a medication.

- **Held or Discontinued Medications**. Students have not known or understood the organization's processes for holding and discontinuing medications and have administered drugs that have been placed on hold or discontinued.

- **Monitoring Issues**. Students may not be aware that vital signs and/or lab values should be checked before administering certain medications.

- **Non-Specific Doses Dispensed**. Student nurses have administered excessive doses when they expected the drug to be provided in a patient-specific dose, but pharmacy had dispensed a larger dose or quantity.

- **Oral Liquids in Parenteral Solutions.** Preparation of oral or enteral solutions in parenteral syringes has led to students accidentally administering these products by the IV route.

- **Preparing Drugs for Multiple Patients.** Student nurses have given medications to the wrong patient, particularly when they prepared more than one patient's medications at a time and brought medications for two or more patients into a room.

ISMP Recommendations for Preventing Student Nurse Errors

ISMP recommends that each practice site hosting student nurses meet with the clinical instructors who will be supervising the students. The organization's medication administration procedures and specific error-prone conditions that exist during clinical rotations should be reviewed, along with system-level safety nets designed to reduce these risks, and safety practices that students and faculty should adopt to further enhance patient safety.

Nursing instructors should be asked to describe error-prone conditions that they have observed in addition to those listed above, and invited to attend orientation programs that cover the organization's safety goals so they can reinforce related safe practices during rotations.

Additional recommendations that apply to specific error-prone conditions are provided in the October 18 issue of the *ISMP Medication Safety Alert!*

About ISMP: *The Institute for Safe Medication Practices (ISMP) is a 501c(3) nonprofit organization that works closely with healthcare practitioners and institutions, regulatory agencies, consumers, and professional organizations to provide education about medication errors and their prevention. ISMP represents more than 30 years of experience in helping healthcare practitioners keep patients safe, and continues to lead efforts to improve the medication use process.*

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